**Atmospheric
Chemistry
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Discussions**

Interactive
Comment

Interactive comment on "A comparison study of regional atmospheric simulations with an elastic backscattering Lidar and Sunphotometry in an urban area" *by* E. Landulfo et al.

E. Landulfo et al.

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The authors would like to thank the referree for his/her comments on our papers and we would like to clarify some points raised as well.

- All the grammar and style issues were accepted and should be on a revised version to posted after the interactive comments session closes.

- As posted by the AERONET site the level 1.5 to 2.0 is mannually inspected after the sunphotometer calibration was carried on. In general these values should not change drastically if the instruments perfomance has not degraded with time, however this is not always the case as the filters might change differently from

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channel to channel and therefore our statement. We will add a comment on that in the paper.

- A São Paulo point should be added to the model generated plots in the revised version.

- The reason not all dates were not included was for paper extension issues.We also tried to give an overview on the most interesting days in our opinion since some days of the period there was not direct lidar measurements due low cloud coverage. We have to stress that the event covered in this paper was with a cold front entrance into São Paulo region which indeed brought alot of moisture and consequently clouds were frequently present. Also we have increased the inset dimension to make it more visible.

- A range-corrected lidar data curtain plot should be added into the supplementary material. since currently we do not carry a "batch" calculation of the backscatter coefficients.

- The large differences should be credit to the horizontal distribution resolution and should in the feature perform the same calculation in a smaller grid however one has to bear in mind that these increases significantly the computational effort hardwarewise speaking.

- A correlation fit parameter should be included in the text.

- The model currently version does not cover calculations on AE and or Lidar Ratio which in principle could make the measurements and simulations hard to compare however this is a first approach which for many aspects should be reported and in the future better explored perhaps in a more extended and dedicated measurement campaign.

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Interactive comment on Atmos. Chem. Phys. Discuss., 9, 9151, 2009.